Student Achievement Through Staff Development
The Design of Training and Peer Coaching

From Joyce, B. & Showers, B. *Student Achievement Through Staff Development – Fundamentals of School Renewa.* Read the selection below; then as a group, use the Discussion Guide following the selection to process what you have read.

Training Components

Several elements are at our disposal. The first component is an exploration of theory through discussions, readings, lectures, etc.; this is necessary for an understanding of the rationale behind a skill or strategy and the principles that govern its use. Study of theory facilitates skill acquisition by increasing one's discrimination of the demonstrations, by providing a mental image to guide practice and clarify feedback, and by promoting the attainment of executive control.

The demonstration of modeling of skill is the second component; it greatly facilitates learning. Skills can be demonstrated in settings that simulate the workplace, either mediated through film or videotape, or conducted live in the training setting. Demonstrations can be mixed with explanation; the theory and modeling components need not be conducted separately. In fact, they have reciprocal effects. Mastery of the rationale of the skill facilitates discrimination, and modeling facilitates the understanding of underlying theories by illustrating them in action.

The third component is the practice of skill under simulated conditions. The closer the training setting approximates the workplace the more transfer is facilitated. Considerable amounts of skill can be developed, however, in settings far removed from and different from the workplace. "Peer teaching" (practice with other teachers) even has advantages. It provides experience as a "student", enables trainees to profit from one another's ideas and skill, and clarifies mistakes. Peer teaching and practice with small groups of children are safer settings for exploration than a full classroom. How much practice is needed depends, of course, on the complexity of the skill. To bring a model of teaching of medium complexity under control requires 20-25 trials in the classroom over a period of about eight or ten weeks. The more simple skills, or those more similar to previously developed ones, will require less practice to develop and consolidate than those that are more complex or different from the teachers' current repertoire.

Peer coaching, the fourth component, is the collaborative work of teachers to solve the problems/questions that arise during implementation; it begins in training settings and continues in the workplace following initial training. Peer coaching provides both support for the community of teachers attempting to master new skills and the time for planning and lesson development so essential to changes in curriculum and instruction.

Research on Training

Training, of course, does not exist outside a context. As described in earlier chapters, a process must be in place to decide what will be the substance of the training, who will provide training, when and where the training will be held and for what duration. The norms of the workplace impinge on the receptivity of participants to various configurations of training experiences, as do labor-relations histories and interpersonal relationships among participants. We have less data on the impact of many of these environmental and governance variables on the effectiveness of training than we have on actual training components. However, we recommend the participatory governance modes described in chapters 2, 3 and 6 to increase understanding of both the content and why it was selected for each component.

Also, as we discussed in chapter 3, we believe that cohesiveness and strong leadership in the school are critical to the success of training. The best trainers, working with the most relevant and powerful content, will find little success or receptivity in poor organizational climates. However, good climates and high motivation will not substitute for well-designed training. Fortunately, we can assert that research and experience have reached the point where we can state that, for specific training outcomes, certain training components or combinations of components proved optimal conditions for learning. Essentially, nearly all teachers can master a wide range of teaching skills and strategies provided that the training is well designed and the climate of the school facilitates and promotes cooperative study and practice.

Hence, designers of training must answer several questions before planning any training experience. For whom is the training intended and what is expected to result from the training? Is follow-up to training built into schools as a permanent structure or must follow up be planned and delivered as part of the training package? Does the content of the training represent new learning for participants or is it an attempt to refine existing knowledge and skills?

Also, designers need to decide which training components will be used and how they will be combined. These components include the presentation of information or theory about the topic of the training, live and mediated demonstration or modeling of new skills and teaching models, and opportunities for practice of new skills and strategies in the training setting as well as in the workplace. Peer coaching of new skills and strategies, which largely occurs in the workplace, ideally is taught and practiced in the training setting as well.

Research on training provides some interesting insights into the efficacy of various training components and particularly, combinations of them (Bennett, 1987; Showers, Joyce, & Bennett, 1987) (see Table 7.1). Information or theory-only treatments increase knowledge by an effect size of about .50 between them (one-half of a standard deviation on a normal curve), whereas theory combined with demonstrations, practice, and feedback results in an effect size of 1.31 for knowledge, compared with about .63 if presentations alone are employed (Bennett, 1987).

Effect Sizes for Training Outcomes by Training Components

	Training Outcomes		
Training Components & Combinations	Knowledge	Skill	Transfer of Training
Information	.63	.35	.00
Theory	.15	.50	.00
Demonstration	1.65	.26	.00
Theory Demonstration	.66	.86	.00
Theory Practice	1.15		.00
Theory Demonstration Practice		.72	.00
Theory Demonstration Practice Feedback	1.31	1.18	.39
Theory Demonstration Practice Feedback Coaching	2.71	1.25	1.68

When skill is the desired outcome of training, the advantage of the combinations is equally clear. Theory or demonstration alone results in effect sizes for skill of around .5 and .26 respectively for refining existing skills, lower for new skills. Theory, demonstration, and practice combined result in an effect size of approximately .7 for skill, whereas theory, demonstration, practice, and feedback combined result in an effect size of 1.18. When in-class coaching is added to the theory, demonstration, practice, and feedback, skill continues to rise.

Strangely, the question of transfer of training has been asked much less frequently in research on training than has the question regarding skill acquisition. Consequently, many fewer studies of training have measured transfer effects than have measured skill acquisition. Perhaps the assumption has been that skill, once developed, would automatically be used in classroom instruction. Recent analyses of the literature on training confirm what many trainers, teacher educators, and supervisors have long suspected-transfer of learned knowledge and skill is by no means a sure bet. In studies that have asked transfer questions (e.g., did participants use new skills in the classroom, did they use them appropriately, did they integrate new skills with existing repertoire, and was there long-term retention of the products of training?), several finding emerge. First, the gradual addition of training elements does not appear to impact transfer noticeably (effect size of .00 for information or theory; theory plus demonstration; theory, demonstration and feedback; effect size of .39 for theory, demonstration, practice, and feedback: However a large and dramatic increase in transfer of training – effect size 1.68 – occurs when in-class coaching is added to an initial training experience comprised of theory explanation, demonstrations, and practice with feedback.

We have concluded from these data that teachers can acquire new knowledge and skill and use it in their instructional practice when provided with adequate opportunities to learn. We have hypothesized, further, that fully elaborated training systems develop a “learning to learn” aptitude and that, in fact, individuals learn more efficiently over the long-term by developing the metacognitions that enable self-teaching in settings where essential training elements are missing.

Implications for Staff Development Practice

We have drawn several conclusions from the research on training that have implications for staff development programs serving individuals, schools, and systems:

First, regardless of who initiates a training program, participants must have sufficient opportunity to develop skill that they can eventually practice in classroom settings.

Second, if the content of training is new to trainers, training will have to be more extensive than for substance that is relatively familiar.

Third, if transfer of training is the objective, training must include the facilitation and structure for collaborative relationships that enable teachers to solve the implementation problems.

Discussion Guide: The Training Design

As you review the research table below, what is a key learning for each of you? Discuss the questions following the table as a group and make a list of ideas you want to remember to include in your Professional Development Process design

Outcomes of Training Design Reported in Effect Sizes

Training Components	*Knowledge*	*Skill*	*Transfer of Training (Implementation)*
Theory/Information	.63	.35	0
Theory/Information/ Demonstrations	1.65	.26	0
Theory/Information/ Demonstrations/Practice	1.31	1.18	.39
Theory/Information/ Demonstrations/ Practice Peer Coaching (Collaboration)	2.71	1.25	1.68

Joyce, B. and Showers, B. (1995). *Student Achievement Through Staff Development*, 2nd ed. White Plains, NY: Longman Publishers.

1. Theory — in the form of lectures, readings, discussions, etc. — is often the least preferred part of training sessions. Would it be more efficient to dispense with this part of training?

2. Discuss three ways to get more demonstrations into training settings when you are learning new instructional strategies.

3. What, besides classroom trials, would constitute "practice" with new knowledge and skills in the area of curriculum, instruction and assessment?

4. In many settings throughout the country, peer coaching is thought to mean observation and feedback, or, in other words, the classic evaluation format. Showers and Joyce, however, designed the collaborative activity in an effort to increase the implementation of innovations in educational settings and thus focused the collaborative activity on the planning and development of lessons, the study of student work, and the building of companionship, which is so important when solving the problems of implementation. Discuss the pros and cons of these two approaches to teacher collaboration, when the object of the activity is the implementation of new learning in the classroom.

5. If your faculty had 20 teachers, and three of them were already knowledgeable about three instructional strategies the faculty had decided to add to its reading program (e.g., *Think Alouds* for comprehension, *Numbered Heads Together* for vocabulary meaning, and *Pair/Share* for discussion of independent reading), how would you design the collective training sessions for your faculty.

List on the back of this sheet any key ideas you want to remember from this discussion for your process design.